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Somerset County Council.

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THE COUNTY EDUCATION COMMITTEE.

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# Annual Report

OF THE

SCHOOL MEDICAL OFFICER,

For the Year 1913.

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**WILLIAM G. SAVAGE, B.Sc. M.D. (Lond.), D.P.H.,**  
County Medical Officer of Health,  
School Medical Officer.



# CONTENTS.

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	<i>Page.</i>
Adenoids ... ..	16—18, 19, 35, 37
After Care work ... ..	24
After treatment ... ..	23
Anæmia ... ..	19, 35
Care visitors ... ..	24
District Education Sub-Committees ... ..	24
Ear disease ... ..	6, 19, 35
Eye Centres ... ..	25
Eye diseases ... ..	19, 35
Exclusion of children ... ..	39
Hearing ... ..	6, 19
Heart diseases ... ..	19, 35
Height of children ... ..	7
Heredity and vision defects ... ..	14
Hygiene teaching ... ..	21
Infantile Mortality investigation ... ..	20
Infectious diseases ... ..	38
Inspection, general arrangements ... ..	4
Inspection, visits paid to schools ... ..	5
Laboratory ... ..	45
Lung diseases ... ..	35
Mentally defective ... ..	8—12
Number of schools ... ..	3
Number of children examined ... ..	5
Nursing Associations ... ..	24
Nurses, District ... ..	24, 37
Nurses, School ... ..	3
Nutrition ... ..	19
Parents, attendance of ... ..	24
Re-inspections ... ..	4
Ringworm ... ..	40—45
Sanitary condition of schools ... ..	45
School closure ... ..	38
Secondary Schools, Medical Inspection in ... ..	22, 46
Skin diseases ... ..	5
Spectacles, provision of ... ..	25
Speech defects ... ..	19
Squint ... ..	14
Staff ... ..	3
Teacher Candidates, Bursars, etc., examined ... ..	23
Teeth ... ..	27—32
Tonsils ... ..	19, 35
Treatment, Results of ... ..	34
Tuberculosis ... ..	25
Ventilation of schools ... ..	45
Verminous condition ... ..	5, 32—34, 38
Vision defects ... ..	13—15, 19
Weight of children ... ..	8

To the Chairman and Members of the Education Committee  
of the Somerset County Council.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour to submit my Fifth Annual Report as School Medical Officer.

The arrangements for Medical Inspection have been carried out on the lines described in detail in earlier reports.

Arrangements were made and were in force during the year for the Medical Inspection of school children in Secondary schools and for periodical Inspections in regard to the sanitary condition of these school premises.

The arrangements for the early detection of cases of tuberculosis in children were improved by co-ordinating the work with the Tuberculosis Scheme. In subsequent years it is hoped that the co-ordination will be extended to treatment.

The dental treatment work has been continued and extended and the School Dentist has been at work all the year.

The Report, like those of previous years, is divided into five parts.

- Part I. Organisation, extent and scope of the Medical Inspection carried out.  
,, II. General review of the facts disclosed by Medical Inspection.  
,, III. Machinery in use for dealing with the defects found.  
,, IV. The results obtained in regard to the treatment of individual children.  
,, V. Schools in relation to infectious diseases. General sanitary arrangements of Schools.

These constitute the chief divisions of the work, and enable the available data to be most conveniently reviewed, although it is not possible to keep the divisions quite distinct.

I am,

Your obedient Servant,

WILLIAM G. SAVAGE.

*Health Department,  
Somerset County Council,  
March, 1914.*

## Part I.

### ORGANISATION, EXTENT AND SCOPE OF MEDICAL INSPECTION.

#### AREA OF COUNTY, NUMBER OF SCHOOLS, Etc.

The area of the Administrative County for the purposes of elementary education is 1,029,269 acres, and the population (census 1911) 335,725.

The number of Elementary Schools is 495, with 585 departments.

		Urban.	Rural.	Total.
Council Schools	...	22	101	123
Voluntary Schools	...	38	334	372
		<hr/>	<hr/>	<hr/>
Total		60	435	495

The average attendance during the year ending 31st March, 1913, was 46,848. Many of the Schools are very small.

#### STAFF.

The Medical Staff during the year consisted, in addition to myself, of three whole-time Medical Inspectors and seven part-time Inspectors. The districts allotted to each are shown in Table II.

Dr. Burnell Jones resigned his appointment in the autumn and his place was filled by the appointment of Dr. T. Stansfield, who started his duties November 13th. Apart from this no change was made during the year in the Medical Staff.

The Clerical Staff of the Health Department was increased by the appointment of an additional Junior Clerk, necessitated partly by the increase in the school work and partly for increase in tuberculosis and general public health work. In spite of this increase a good deal of overtime had to be worked.

During 1912 three whole-time School Nurses were employed. This arrangement was in force for the earlier part of 1913. As I mentioned in last year's report it is an economical and more effective arrangement to try and diminish the area to be covered by each nurse by increasing the classes of work to be carried out. A convenient and satisfactory method of doing this is to combine the work with that of the Tuberculosis Health Visitors. During the year it has been found possible to do this with regard to three nurses. Miss Reese and Miss Toms two of the School nurses were appointed in July half-time School nurses and half-time Tuberculosis Health Visitors. An additional appointment of the same dual nature was also made for the Williton and neighbouring areas in November, Miss Mills being appointed. The remaining School nurse (Miss Weeks) at present remains a whole-time School nurse.



The nursing staff at the end of 1913 consisted therefore of one whole-time School Nurse and three half-time nurses, the remainder of their time being devoted to tuberculosis work. The scheme approved by the Education Committee contemplates the ultimate appointment of six half-time nurses stationed in different parts of the county and available to reach any school in it if so required.

For School Inspection work and following up of the cases a large number of district nurses are employed.

### GENERAL ARRANGEMENTS FOR INSPECTION.

The routine adopted for Medical Inspection was set out fully in the Annual Report for 1908, and need not be recapitulated. A few minor alterations only have been made in addition to those recorded in last year's report.

In July a fresh circular to the School Medical Inspectors was drawn up and issued. It embodied these alterations of procedure and called attention to a number of points in connection with the scheme which were not always followed by the Inspectors. For example, the great importance of the re-examination of defective children, the importance of properly referring cases to the district nurses, and the need of attention being paid to the sanitary condition of the schools, were all emphasized. The eye conditions which justified reference to the Oculist were slightly altered from the earlier procedure and were set out in detail. A circular to School Medical Inspectors had not been issued since January, 1909.

The work has been carried out without friction or difficulty, and, as in previous years, great help has been given by the teachers. The percentage of parents who attended the inspections was 41 (the same as for 1912) but varied somewhat in different parts of the County. Only a few refusals by parents to allow their children to be examined were met with.

The number of children re-inspected during the year was 4228 a slight decrease compared with the previous year. This is exclusive of the large number of children referred to the School Oculist. This is a very important part of the work and great attention is paid to it. All the cards of children previously found defective are given to the Inspector at his next visit, and he re-inspects all or as many as he thinks necessary. It is very essential to concentrate attention upon the cases which specially require it.

The percentage results of the returns by each Inspector under the different items of examination have been periodically compiled and circulated to the different Inspectors.

## EXTENT AND SCOPE OF MEDICAL INSPECTION.

The number of visits paid to Schools for the purpose of conducting routine inspections during the year was 1219. Of these, 417 were paid by the seven part-time Inspectors and 802 by the full-time officers. The number of children inspected by the former was 7,441 or 17·8 inspections per School session of rather under 2½ hours; and by the latter 13,094 or 16·3 inspections per session. The average number of inspections per session by all Inspectors was 16·8.

The children selected for examination during 1913 were for the same age period, etc., as those examined during 1912.

The number of children inspected, classified for sex and certain selected ages is stated in Table I. In Table II. is shown the number of inspections in each district and under the different groups examined.

## Part II.

### GENERAL REVIEW OF THE FACTS DISCLOSED BY MEDICAL INSPECTION.

In previous reports considerable space has been occupied by a detailed consideration of the statistical information accumulated as to defects found in children, while in the 1911 report the figures for the three years 1909-1911 were considered together. Since the figures vary but little from year to year, it will be unnecessary to discuss these facts in detail in the present report.

The actual figures for 1913 are set out in Tables III., IV. and V.

#### VERMINOUS CONDITION OF HEAD.

The results obtained by the Medical Inspectors are very similar to those for last year. For 1910 the percentage of children found verminous by Medical Inspectors was 21, for 1911 it was 16, for 1912, 11·6, and for 1913, 12 per cent. While there is no improvement over the previous year the total decline is striking. Since Medical Inspection visits are not surprise visits and many of the children are specially cleaned up for the visits of the Inspectors these figures must not be pressed too far. The improvement effected in this direction can be better discussed in the section dealing with the work of the School Nurses. (See page 32).

#### SKIN DISEASES.

During 1913 the Medical Inspectors reported amongst routine children 37 cases of Impetigo, 5 of Scabies, 51 of Ringworm of scalp and 13 of Ringworm of the body. In addition, 100 other kinds of skin diseases (mostly eczema) were found. A few cases (See Table V.) were also found among children specially presented.

## TEETH.

The following table shows the average number of carious teeth found by the Medical Inspectors for the last five years.

		1909	1910	1911	1912	1913
Boys (12 & over)	...	2·5	2·4	2·4	3·4	2·4
Girls (12 & over)	...	2·4	2·4	2·3	3·1	2·1
Boys (age 7)	...	4·0	4·4	4·7	4·4	4·2
Girls (age 7)	...	3·9	4·3	4·4	4·2	4·1
Boys (Infants)	...	2·6	2·8	2·8	2·4	2·7
Girls (Infants)	...	2·7	2·7	2·8	2·0	2·6
Total	...	<u>3·0</u>	<u>3·1</u>	<u>3·2</u>	<u>3·3</u>	<u>3·0</u>

The figures are all strikingly alike, and show the enormous prevalence of dental caries amongst School children. Large as the figures are, they are a decided under-statement, since only those teeth are recorded as carious which are detected by examination of the mouth without the use of probe or mirror. Undoubtedly, in addition, there are a large number of teeth which are showing slight signs of decay not appreciable on incomplete examination.

## EAR DISEASE AND HEARING.

The following table shows the prevalence of ear discharge, the so-called "running ears," in children during the last five years.

Year.	Number examined.	EAR DISCHARGE.			
		Present.	Recent.	Past.	Total.
1909	16,740	112	445	231	788
1910	14,648	91	145	175	411
1911	15,310	94	237	282	613
1912	15,092	114	200	181	495
1913	14,344	50	177	289	516
5 years.	76,134	461	1,204	1,158	2,823

There are no satisfactory arrangements in the County for the treatment of this serious condition. Inspectors explain to the parents—when present—its serious nature and the danger of neglecting ear discharge and all cases are advised to go to their own doctor for treatment. These cases are also referred to the District Nurses and some obtain treatment in this way.



It is satisfactory therefore to record for 1913 a considerable diminution in the number of cases of present or recent ear discharge, although the inclusion of the cases with a history of old ear discharge brings the total up to above that for 1912.

Cases were met with at all the three age periods examined with no marked prevalence at any one age period. The actual figures are shown in Table III.

Ear discharge and adenoids are the two common causes of deafness in school children while these two conditions are often associated together (see page 16).

During 1913, 209 cases of slightly defective hearing and 48 cases of markedly defective hearing were found among routine cases. 2·2 per cent. of the children examined above the infants showed defects of hearing.

#### HEIGHT AND WEIGHT.

During 1913 all heights and weights were carefully recorded for individual children but no summary records were made, thus saving much time in the office.

Figures extending over four years have been tabulated in regard to both the height and weight of all the school children examined. In this way numbers sufficiently large to serve as reliable standards for Somerset children have been obtained and further tabulation is unnecessary.

These standard figures are shown in the following two tables.

#### AVERAGE HEIGHTS, 1909—1912.

AGE.	BOYS.							GIRLS.						
	SOMERSET.							SOMERSET.						
	Total number measured.	Urban.		Rural.		Total.		Total number measured.	Urban.		Rural.		Total.	
		cms.	inches.	cms.	inches.	cms.	inches.		cms.	inches.	cms.	inches.	cms.	inches.
3-4	2094	93·1	36·6	93·8	36·9	93·3	36·7	1853	92·6	36·5	92·6	36·5	92·6	36·5
4-5	3781	98·8	38·9	99·9	39·3	99·2	39·1	3279	98·5	38·8	99·0	38·9	98·5	38·8
5-6	3899	104·7	41·2	104·9	41·3	104·7	41·2	3993	104·0	40·9	104·7	41·2	104·3	41·0
6-7	1700	110·7	43·5	110·3	43·4	110·3	43·4	1656	108·2	42·6	109·5	43·1	108·7	42·8
7-8	9538	115·5	45·5	116·2	45·7	115·9	45·6	9015	114·8	45·1	115·5	45·5	115·2	45·3
8-9	853	119·6	47·0	120·1	47·3	119·8	47·1	752	120·5	47·4	120·0	47·2	120·2	47·3
9-10	441	124·7	49·1	126·2	49·7	122·9	48·4	448	124·7	49·1	125·7	49·5	125·2	49·3
10-11	461	130·6	51·4	130·8	51·5	130·6	51·4	502	130·8	51·5	131·2	51·6	130·8	51·5
11-12	453	134·1	52·8	136·1	53·6	135·1	53·2	505	135·1	53·2	136·0	53·5	135·3	53·3
12-13	9455	139·1	54·8	140·2	55·1	139·4	54·9	8881	140·9	55·5	141·4	55·7	141·2	55·6
13-14	1128	143·0	56·3	142·7	56·2	142·7	56·2	1104	145·7	57·4	145·2	57·2	145·5	57·3

## AVERAGE WEIGHTS, 1909—1912.

AGE.	BOYS.							GIRLS.						
	SOMERSET.							SOMERSET.						
	Total number weighed.	Urban.		Rural.		Total.		Total number weighed.	Urban.		Rural.		Total.	
		kilos.	lbs.	kilos.	lbs.	kilos.	lbs.		kilos.	lbs.	kilos.	lbs.	kilos.	lbs.
3-4	2099	14.9	33.0	15.1	33.3	15.0	33.1	1858	14.4	32.0	14.5	32.1	14.4	32.0
4-5	3780	16.2	35.9	16.3	36.2	16.3	36.0	3276	16.0	35.4	15.9	35.2	15.9	35.3
5-6	3910	17.6	39.0	17.8	39.3	17.7	39.1	3990	17.3	38.3	17.3	38.3	17.3	38.3
6-7	1702	19.3	42.8	19.4	42.9	19.3	42.8	1651	18.8	41.7	18.8	41.7	18.8	41.7
7-8	9423	21.3	47.1	21.5	47.5	21.4	47.3	9176	21.1	46.4	20.7	45.7	20.8	46.0
8-9	862	22.6	49.9	23.0	50.9	22.8	50.4	749	22.7	50.3	22.6	49.7	22.6	50.0
9-10	445	25.4	55.5	25.4	56.2	25.2	55.8	447	24.4	54.0	25.0	55.4	24.7	54.7
10-11	460	27.5	60.9	27.9	61.3	27.6	61.1	488	27.4	60.5	27.3	60.4	27.3	60.4
11-12	439	29.8	65.9	30.4	67.3	30.1	66.6	514	30.0	66.4	30.1	66.6	30.1	66.6
12-13	9470	32.8	72.5	33.2	73.4	33.0	72.9	8869	33.4	73.4	33.8	74.8	33.5	74.1
13-14	1123	34.9	77.1	34.9	77.1	34.9	77.1	1126	36.8	81.3	36.6	80.8	36.6	80.8

### MENTALLY ABNORMAL CHILDREN.

The passing of the Mental Deficiency Act, 1913, makes it a matter of great importance to carefully consider this group of children and the steps which can be taken to diagnose, classify and educate them. Section 31 of this Act states:—

“The duties of a local education authority shall include a duty to make arrangements, subject to the approval of the Board of Education:—

- (a) For ascertaining what children within their area are defective children within the meaning of this Act;
- (b) For ascertaining which of such children are incapable by reason of mental defect of receiving benefit or further benefit from instruction in special schools or classes;
- (c) For notifying to the local authority under this Act, the names and addresses of defective children with respect to whom it is the duty of the local education authority to give notice under the provisions hereinbefore contained.

In case of doubt as to whether a child is or is not capable of receiving such benefit as aforesaid, or whether the retention of a child in a special school or class would be detrimental to the interests of the other children, the matter shall be determined by the Board of Education.

The provisions of section one of the Elementary Education (Defective and Epileptic Children) Act, 1899, shall apply with the necessary modifications for the purposes of this section.”

As Sir George Newman in his 1912 Annual Report states it becomes the duty of every local education authority:—

- (i.) To ascertain the existence of mental defect of such kind or degree as to justify the diagnosis of feeble-mindedness, imbecility, or idiocy;

- (ii.) To determine whether a child diagnosed as feeble-minded is or is not capable of benefiting from education in a Special School; and
- (iii.) To notify to the Local Authority, under the Mental Deficiency Act, all defective children over the age of seven (a) who are incapable of education in Special Schools; (b) who, though educable, are detrimental to other children; (c) who require supervision or guardianship under the Mental Deficiency Act; or (d) who after leaving a Special School need institutional treatment or guardianship.

Mentally abnormal children may be divided into—

1. The dull or backward children.
2. Feeble-minded children.
3. Children who are imbecile or idiot.

The idiot or imbecile children are ineducable and are, therefore, excluded from school. In only a few cases have they been subjected to medical inspection at school so that no records are available in the Health Department as to the number of such children. Enquiries were made through the District Education Committees as to the number of such children and these returns are shown in the table on page II.

No data are available as to the number of children who may be classed as dull and backward. The classification adopted for "Mental Condition" in the routine and special examination is into A, B, C, and M.D., or Imbecile.

A = Bright	}	"All children thus classified are taken to be capable of benefit by instruction in an ordinary School. Mentally defective or imbecile children must be marked 'M.D.' or 'Imbecile,' not C."
B = Average		
C = Dull		

No summaries have been compiled of the respective proportion of A, B and C children as the results will vary greatly with the individual recorders, *i.e.* Medical Inspectors and Teachers. If a careful record is to be kept of the dull and backward children it is not enough to summarily classify children in this way unless a definite recognised standard of backwardness is drawn up and followed.

Sir George Newman in the report already quoted states:—

"It will be convenient, for instance, to record all children who are two or three years (but not more) behind their age in intellectual capacity as backward or retarded; and the more severe cases among these would, no doubt, be specially presented by teachers to the school doctor for examination for more specific mental defect."

Teachers might be encouraged to keep a special list of backward children, but for each Medical Inspector to properly investigate and examine all the backward children would take a long time and the value of the results would not be commensurate to the trouble involved.

In the County scheme special attention is directed to mentally defective children. The instructions to Medical Inspectors in regard to this are as follows:—

“MENTAL DEFECTS. Teachers are instructed to submit for examination all children in whom there is any suspicion of mental defect. The Medical Inspector should see that this is done, and should inquire into the case of any child who is backward for his age. Mentally defective children must be classified as M.D., and the entry in item 9 of the column must be M.D., not C., which implies that the child is below the average in mental condition, but not defective. A mentally defective child is incapable of receiving reasonable benefit from instruction at an ordinary elementary school, but is capable of receiving benefit at a school specially suited to such children. A child incapable of receiving benefit at any school should be recorded as Imbecile. No child under seven years of age must be recorded as M.D., but Imbeciles of any age must be excluded from school. In case of doubt as to whether a child is M.D. or not, it should be classified as C, with a note of the doubt, and then re-examined in the following year. Cases of “spurious mental defect” due to malnutrition, neglect or ill-treatment, adenoids, sensory defect, etc., must be carefully distinguished from primary mental defect, and not classified as M.D.”

The cards of all children returned as M.D. are copied in the Office and thus form a register of these cases. The number of mentally defective children on this register on January 1st, 1914, is shown in the following Table.



**Mentally Defective Children.** (January 1st, 1914.)

DISTRICT.	Mentally defective children on Health Department Register.		Additional cases reported by S.A.O.	TOTAL No. of Cases.	Idiots and Imbeciles.
	Excl. from School.	At School.			
Axbridge ...	4	38	4*	46	1
Bath ..	1	6	6	13	—
Bridgwater ...	6	24	14	44	1
Chard Rural ...	1	10	6	17	—
Chard Urban ...	—	4	—	4	1
Clevedon ...	—	6	—	6	1
Clutton ...	1	11	10	22	—
Crewkerne ..	4	4	1	9	—
Dulverton ..	—	—	4	4	1
Frome ..	—	11	23	34	2
Glastonbury ...	2	2	—	4	4
Keynsham ...	—	5	8	13	1
Langport ...	—	5	11	16	3
Long Ashton ...	2	10	13	25	1
Midsomer Norton	1	11	2	14	1
Radstock ...	1	2	3	6	1
Shepton Mallet R.	—	4	1	5	1
Shepton Mallet U.	—	—	1	1	—
Street ...	—	7	3	10	1
Taunton ...	1	13	26	40	3
Wellington Rural	—	8	6	14	—
Wellington Urban	—	7	—	7	3
Wells ...	2	16	15	33	2
Weston-super-Mare	2	16	1	19	—
Williton ...	1	15	4	20	1
Wincanton ...	—	8	—	8	3
Castle Cary ...	—	4	7	11	—
Yeovil ...	—	2	3	5	5
	29	249	172	450	37

\*One child blind, deaf and dumb and cripple.

This Table shows in addition to the children medically examined the number of children reported by School Attendance Officers as probably mentally defective but which have not been examined by the staff of the Health Department. It will be necessary to carefully examine and classify these children as some of them probably belong to other groups. These additional children include a number who have left school but who are not 16 years of age.



While all these children have been reported as mentally defective, before any special treatment is undertaken under the new conditions described by the Act, it will be necessary to arrange for them to be submitted to a much more complete examination. No such complete examination in this definite way has been undertaken. This special investigation will take up a great deal of time, and great care will have to be exercised to have uniform standards and methods of classification.

A few of the children now classed as mentally defective may be considered border line cases, between mentally backward and mentally defective. Such cases should be given the benefit of the doubt and kept at the ordinary schools for a while, being at the same time kept under careful observation and examined at fairly frequent intervals. Arrangements for ascertaining which children are defective within the meaning of the Act are subject to the approval of the Board of Education.

#### LUNG DISEASES AND TUBERCULOSIS.

During 1913, 197 cases of lung diseases were recorded amongst the routine inspections. Only 51 were cases of tuberculosis or suspected tuberculosis, while 69 were cases of bronchitis and 77 other lung conditions, some being merely cases in which the breathing sounds were not altogether satisfactory. In these cases the children are kept under observation.

In addition, 20 cases of phthisis and 35 suspected cases were found amongst the specially presented children.

Of other varieties of tuberculosis, 6 cases of tubercular glands are recorded, 5 being routine and 1 "special," and 8 of other kinds of tuberculosis, 3 of these being "specials."

The figures for the past five years are as follows, giving *routine* cases only. They may be compared with the percentage of 0.59 recorded for half a million children in the country generally (year 1911), compiled by Sir George Newman:—

Year.	Children examined.	Phthisis or suspected Phthisis cases.	Other varieties of Tuberculosis.	Total cases of Tuberculosis.	Percentage of Tuberculosis.
1909	16,740	41	7	48	0.28
1910	14,648	20	6	26	0.18
1911	15,310	22	8	30	0.19
1912	15,092	34	24	58	0.38
1913	14,344	51	10	61	0.42
5 years.	76,134	168	55	223	0.29

The figures are again higher than for the previous year. While as pointed out in the last year's report they are undoubtedly an under-statement, they certainly show that definite cases of pulmonary tuberculosis are not prevalent amongst Somerset school children.

From the work of the tuberculosis Officers it is evident that there are many more infected children, even judged by clinical signs, than these figures would suggest. To detect these cases repeated examination and the use of special methods is necessary. The arrangements mentioned on page 25 will greatly facilitate the the detection of these cases.

The extent of tuberculosis in children will be dealt with more fully in my report for the year as County Medical Officer of Health.

### VISION DEFECTS.

The figures for the routine cases are given in Table III. "Slight defects" includes visual acuity of  $\frac{6}{9}$  to  $\frac{6}{18}$  and "Very defective" any greater defect.

During the year 1,566 cases were examined by the Oculist, 400 being re-examinations. In 1101 of the new cases errors of refraction were present. The nature of the defects found are given in the following table.

		BOYS.				GIRLS.				ALL AGES.		
		Under 7.	7-8.	12 and over.	Other ages.	Under 7.	7-8	12 and over.	Other ages.	Boys.	Girls.	Totals.
Refractive Errors.	Simple Hypermetropia	27	34	46	50	25	33	68	53	157	179	336
	Simple Hyper. Astig.	0	10	32	19	0	10	49	37	61	96	157
	Compound Hyper. Astig.	5	38	41	53	3	34	64	73	137	174	311
	Simple Myopia. . .	2	3	16	14	1	5	24	20	35	50	85
	Simple Myopic Astig.	1	2	2	1	0	0	6	0	6	6	12
	Compound Myopic Astig.	2	2	17	8	0	6	26	5	29	37	66
	Mixed Astigmatism . .	0	4	14	13	0	8	19	17	31	44	75
	Anisometropia. . .	1	1	7	6	0	5	18	7	15	30	45
	Irregular Astigmatism			2	3	1	1	4	3	5	9	14
	<i>Totals</i> . .	38	94	177	167	30	102	278	215	476	625	1101
Old cases re-inspected . .		8	32	47	123	15	12	50	113	210	190	400
Cases without Error of Refraction		1	3	10	16	3	4	14	14	30	35	65
Total cases of Refraction examined		47	129	234	306	48	118	342	342	716	850	1566

		Boys.	Girls.	Totals.
Disorders of Motility and Fusion.	Converg. Strabismus	75	68	143
	Alternating "	11	15	26
	Divergent "	15	18	33
	Heterophoria ..	4	2	6
	Nystagmus ..	7	3	10
Totals ..		112	106	218
Diseases of the Eye.	Disease of Conjunctiva	43	37	80
	" " Cornea and Sclerotic	12	15	27
	" " Iris and Ciliary body	2	2	4
	" " Lens ..	9	9	18
	" " Vitreous ..	2	1	3
	" " Choroid and Retina	6	4	10
	" " Optic nerve	3	6	9
	" " and Injuries of Eyeball	1	1	2
	Congenital abnormalities	8	5	13
	Totals ..	86	80	166
Disease of the adnexa of Eye.	Disease of Eyelids ..	49	71	120
	" " Lachrymal apparatus	2	0	2
Totals ..		51	71	122
Symptomatic and nerve disorders (including headache associated with eye strain).		139	239	378
Cases with definite history of hereditary defective vision		57	108	165

*Development of errors of refraction with special reference to the influence of heredity.*

The following remarks by Dr. Bendle deal with this important subject, one to which he has paid considerable attention.

It is difficult to determine with exactitude how far errors of refraction existing in children attending elementary schools are associated with similar conditions amongst other members of their respective families. It is impracticable to estimate the refraction, even roughly, of a very large number of parents whose children are being dealt with at the eye examinations, but in a minority of cases I have been able to make some investigations. In other instances I have compared the refractive conditions of children examined this year with those of brothers or sisters dealt with by me in previous years. From these two sources I have ascertained something of the refractive conditions existing in 35 to 40 % of the families from which my cases were drawn. In over 15 % of the total number of new cases examined this year I obtained definite evidence of refractive errors existing

in other members of the same family. It is reasonable to assume that of the cases referred to me, at least 30 % were from families in which other members were afflicted with similar trouble.

Two causes appear to me to be responsible, viz :—

- . (1.) Hereditary weakness or susceptibility.
- (2.) Unsatisfactory conditions and surroundings in the earlier periods of life.

Hypermetropic conditions were perpetuated in the offspring, much more regularly than myopic ones. The children of myopic parents, although usually exhibiting myopic conditions, not infrequently developed hypermetropia in some form.

Very striking similarities have been observed in children of the same family. The following are two good instances :—

On one occasion I examined 3 children of the same parents consecutively—2 girls and a boy—all three possessed precisely the same refractive error and that a very unusual one.

In another instance I found 5 members of one family were afflicted with left internal strabismus.

The resemblances in myopic families are much less close than in hypermetropic ones.

The records of the past four years indicate that where myopia is a family trait the danger and calamity of progressive myopia is much greater. The family history of all cases of myopia should be obtained whenever possible so that in suspected cases of progressive myopia the utmost care may be exerted to limit the extent of this crippling and irremediable disorder during school-life—the period of greatest danger.

The largest percentage of cases of myopia has occurred in the colliery districts and in general they are of a more severe type than elsewhere. The question obviously arises as to whether the occupation of the father is in any way related to this.

Hypermetropic troubles appear abnormally prevalent where home conditions are least satisfactory and especially in the districts where the mothers are engaged in the factories. The conclusion seems warranted that the regular development of the Eye from the normal hypermetropic condition of infancy to the healthy condition of emmetropia, is as much interfered with as other parts of the body, by lack of proper care and suitable surroundings in early life.

My investigations are imperfect and incomplete, but as far as they go they suggest that a wider and more accurate knowledge of the conditions referred to will enable measures to be taken to reduce the number and severity of the cases met with as well as to reduce very greatly the amount of distress associated with errors of refraction.



## ADENOIDS.

Careful records have been kept extending over many years of both the associated conditions and the after history of a considerable number of children suffering from severe adenoids. 649 cases were dealt with in this manner. They were all cases recorded as "severe nasal obstruction probably due to adenoids." Digital examination was not used to verify the diagnosis, but the other signs of adenoids were all present.

While it is well known that the adenoid condition is frequently associated with other conditions, particularly with enlarged tonsils, enlarged glands and deafness, exact figures in this direction are still required.

The following Table shows the extent to which these conditions were present in the series of cases investigated. For comparison purposes the extent to which these conditions are present amongst healthy Somerset children is given in a parallel column.

## ALL PERCENTAGES.

Condition.	Classification of Condition.	Adenoid Cases.	Unselected Children. (examined in 1912).
Nutrition ...	Above normal ... ..	12·7	23
	Normal ... ..	61·2	65
	Below normal ... ..	25·5	12
	Bad ... ..	0·6	0·2
Mental Condition*	Bright ... ..	12·7	17·6
	Average ... ..	64·5	73·2
	Dull ... ..	20·9	8·9
	Mentally defective ... ..	1·9	0·3
Tonsils ...	Slightly enlarged ... ..	29·0	12·0
	Considerably enlarged ... ..	28·1	3·1
	Urgently in need of removal ... ..	3·0	0·3
	Normal ... ..	38·0	84·6
Glands ...	Not recorded ... ..	1·8	
	Normal ... ..	41·4	84
	Slightly enlarged ... ..	41·4	14·2
Hearing ..	Considerably enlarged ... ..	17·2	1·8
	Normal ... ..	69·8	98·06
	Slightly defective hearing ... ..	19·9	1·56
Ear Discharge ...	Deaf ... ..	10·3	0·38
	Present ... ..	3·2	0·75
	Recent ... ..	8·3	1·8
	Old history ... ..	2·0	1·2
	None at any time .. ..	86·4	96·8

\*NOTE.—Not recorded for 175 cases, these being under 6 when examined.



This Table shows the much greater liability of adenoid cases to also suffer from enlarged tonsils, enlarged glands, deafness and ear discharge. In addition their nutrition is somewhat lower than the normal, while the group contains a higher proportion of dull and mentally defective children.

Some comparisons were also instituted as regards weight, but no extended comparisons could be made owing to the different ages of the adenoid children. Figures were therefore only got out for the children aged 7—8.

The average weight of 272 children, aged 7—8, suffering from severe adenoids =  
21.2 kilos.

The average weight of 4443 unselected children, aged 7—8, examined in 1912 =  
21.5 kilos.

These figures show that the adenoid child is not undersized in this particular age group.

Some further statistics were instituted as to the relationship of tonsils and enlarged glands and carious teeth amongst these adenoid cases. The results are shown in the following three Tables.

PERCENTAGE OF ADENOID CASES CLASSIFIED ACCORDING TO CONDITION OF  
TONSILS AND CERVICAL GLANDS.

Condition of tonsils.	CONDITION OF GLANDS.		
	Normal.	Slightly enlarged.	Markedly enlarged.
Normal . .	54.2	29.9	15.8
Slightly enlarged ...	35.2	49.4	15.4
Markedly enlarged ...	31.2	48.5	20.3

Of the 649 cases 303 were cases in which there were 3 or less than 3 carious teeth recorded, while in 346 cases there were 4 or more than 4 carious teeth. The cases were divided and the relationship of tonsils and glands worked out separately for these two groups of cases. The results are shown in the two following Tables.

CASES WITH 3 OR LESS CARIOUS TEETH. (Percentages).

Condition of tonsils.	CONDITION OF GLANDS.		
	Normal.	Slightly enlarged.	Markedly enlarged.
Normal ...	67.7	22.5	9.8
Slightly enlarged ...	40.8	46.0	13.2
Markedly enlarged ...	34.9	48.8	16.3

## CASES WITH 4 OR MORE CARIOUS TEETH. (Percentages).

Condition of tonsils.	CONDITION OF GLANDS.		
	Normal.	Slightly enlarged.	Markedly enlarged.
Normal ...	38·6	38·6	22·8
Slightly enlarged ...	31·2	51·8	17·0
Markedly enlarged ...	28·4	48·3	23·3

These Tables show that markedly enlarged glands are met with more frequently amongst the cases with markedly enlarged tonsils than when they are normal or slightly enlarged and that this is accentuated if there is a considerable degree of dental caries.

It is the experience of every County that a great deal of persuasion is required before parents can be induced to have their children operated upon for adenoids. The following Table shows the progress in this direction (cases and percentages).

Adenoid condition.	Number of years under observation.			
	0—1	1—2	2—3	over 3 years.
Removed ...	12	19	35	38
Improved ...	24	31	32	37
Not improved ...	37	39	28	11
	73	89	95	86

## PERCENTAGES.

Removed ...	16·4	21·3	36·8	44·2
Improved ...	32·9	34·8	33·7	43·0
Not improved ...	50·7	43·8	29·5	12·8

This Table shows that only 16·4 per cent. of the cases were operated upon within a year of their condition being recognized, and only 44·2 per cent. of those diagnosed three years earlier received operative treatment.

Sixty-five cases recorded as normal on first examination, and 57 as slight cases of adenoids were subsequently diagnosed as suffering from severe adenoids.

## OTHER DEFECTS.

The figures in regard to the incidence of other defects and conditions are set out in the tables, and no special discussion of each is required. The percentage prevalence in regard to the most important of them is set out in the following table.

## PERCENTAGES.

CONDITION.				Average for three years 1909, 1910, 1911.	1912.	1913.
Nutrition.	Good or Average	...	...	86·0	88·0	88·6
	Below Normal	...	...	14·0	12·0	11·0
	Bad	...	...	0·2	0·24	0·11
Verminous condition of	Head	..	...	19·9	11·6	12·0
"	"	"	Body	0·37	0·46	0·45
Average number of carious teeth per child				3·1	3·3	3·0
Ear Discharge.	Present	...	..	0·6	1·0	0·34
"	"	"	At some previous period	3·8	2·5	3·2
Defective Hearing	...	...	...	2·2	1·9	1·7
Somewhat enlarged tonsils	...	..	..	12·0	12·0	9·9
Markedly enlarged tonsils	...	...	...	4·0	3·4	3·5
Slight degree of adenoids	...	...	...	11·0	9·0	6·8
Marked adenoids causing obstruction	...	...	...	1·6	1·0	1·0
Defective speech.	(Present as a primary condition)	Boys	...	0·76	0·95	0·3
		Girls	...	0·3	0·3	0·16
Decidedly mentally defective children				0·33	0·39	0·28
Heart Disease	...	...	...	0·45	0·36	0·11
Anaemia	...	...	...	2·35	1·8	1·4
External Eye disease	..	...	...	3·6	4·0	2·8
Vision defects.	7 years	Boys	...	15·5	14·2	16·7
	7	"	Girls	17·2	16·2	16·4
	12 and over	Boys	...	21·6	25·4	27·9
	12	"	Girls	28·8	31·4	31·1

The immediate results of Medical Inspection are chiefly in the direction of striving for and attaining, with more or less success, rectification of defects found to exist in individual children. Medical inspection should aim at more than this, and its opportunities should be utilised to collect data and to study the causes of the defects met with amongst School children. Only in this way can the *prevention* of these defects be ultimately achieved.

The field is large and the material abundant but such investigations involve prolonged inquiry and take much time. School Medical Officers and their Assistants are so occupied with the urgent demands of the daily routine that little or no time is available for work of this character. Fortunately many school medical officers are alive to the importance of this work and are doing what they can even under unfavourable conditions. In this way most valuable data obtained from different parts of the country is being acquired.

In the present report is included valuable data collected by Dr. Bendle; some analyses of the relationship of adenoids to other conditions are worked out, and the following interesting inquiry by Dr. Parker on a most important subject.

**Report by Dr. Parker upon Infantile Mortality and the Health of Survivors in Elementary Schools.\***

\* The full paper is published in "Public Health," April, 1913.

During 1912 and 1913 I made some enquiries in the course of Medical inspection, with a view to obtaining evidence of the relation of Infantile Mortality to the health of surviving members of the same families in which the mortality occurred.

The facts were obtained from the mothers who were present at the examination of their children.

As in the ordinary course of medical inspection, the children were classified according to their nutrition, as A=good, B=average, C=poor, and D=bad.

From the mothers I ascertained, among others, the following facts:—

- (1) Number of children born alive of the same mother.
- (2) Number of deaths, and ages at which they occurred, among these children.

The facts were recorded in respect of 471 children, of whom 115 were placed in class A, 182 in class B, 172 in class C, and 2 in class D.

The following are the results arrived at by summation of the live births, and deaths at different ages, in families represented at the inspection by children in the various classes.

In the families represented by 115 children in class A, 481 live births occurred, with 27 deaths under one year of age, and 35 deaths at ages under five years. This gives a mortality under one, of 56·1 per 1000 births, and under five of 72·8 per 1000 births.

In families represented by 182 children in class B, 846 births occurred with 52 deaths under one, and 70 deaths under five; a mortality under one, of 61·5 per 1000 births, under five, of 82·7.

Taking classes C and D together on account of the fact that the figures for class D are too small to be considered separately, there were 174 children in these classes. Among these families 882 live births occurred, with 86 deaths under one, and 112 deaths under 5; giving a mortality under one, of 97·5, and a mortality under five, of 127 per 1000 births.

*Infantile Mortality.*

In class A	= 56·1 per 1000.
„ „ B	= 61·5 „ „
„ Classes C and D	= 97·5 per 1000.



These figures give no support to the hypothesis that a high infantile mortality benefits the health of the population by weeding out the unfit. They show on the contrary that a high infantile mortality is associated with a lower condition of health among the survivors.

This supports the view that the causes of high infantile mortality, acting not only on those who die, but in lesser degree on the survivors, are injurious to their health.

### HYGIENE INSTRUCTION IN SCHOOLS.

In former reports I have dealt, in some detail, with the importance of Hygiene instruction in schools, and have given some particulars of what is being done. I am glad to report further extensions in this direction.

During the year the Higher Education Sub-Committee have continued to extend their arrangements for the training of teachers in Hygiene with a view to this subject being efficiently taught in the elementary schools. They arranged for Miss C. M. Symonds to give courses of Lectures on "Infant Care and Management and Hygiene," to Teachers at a number of Centres. Lectures were given during the year at 15 Centres compared with 5 last year. The lectures were given at Bruton, Burnham, Clevedon, Frome, Glastonbury, Ilminster, Keynsham, Langport, Midsomer Norton, Radstock, Shepton Mallet, Taunton, Wellington, Wells, Wincanton. These lectures were well attended

Lectures have also been arranged but not yet given at Chard, Crewkerne, Minehead and Wiveliscombe. The lectures have been extended from 7 to 10 in number.

The Lecture Course given by Miss Symonds consisted of the following subjects :

- |            |   |
|------------|---|
| Lecture I. | Personal Hygiene.                         |
| „ II.      | Air and ventilation.                      |
| „ III.     | The dwelling house.                       |
| „ IV.      | Food.—General Principles.                 |
| „ V.       | Care of Infants apart from feeding.       |
| „ VI.      | Feeding of Infants.                       |
| „ VII.     | Feeding of young children.                |
| „ VIII.    | Care of young children.                   |
| „ IX.      | Common ailments of children.              |
| „ X.       | Accidents in relation to school children. |

A certain amount of instruction in Hygiene and kindred subjects is also given in Evening Continuation Schools. During the Session 1912-13 Domestic Economy and Hygiene was taught in 15 schools, Domestic Economy in 14 and Home Nursing in 1 school. Hygiene as a separate subject was not taken in any of the schools.



## SECONDARY SCHOOLS MEDICAL INSPECTION.

In 1912 the County Education Committee decided to make an offer to the Governors of Secondary Schools, to arrange for the Medical Inspection of their pupils, as soon as practicable after their entry into the School. In July 1912, Circular H84 (1912) was issued (see Appendix) to the Governors of all Secondary Schools in the County receiving grants.

Replies were received from 13 schools and in 9 of these it was requested that Medical Inspection of pupils, in accordance with the scheme set forth in the Circular, should be arranged. In 2 of these schools the arrangement is only to come into force in 1914. Other arrangements for the Medical Inspection of pupils had already been made locally in the case of 1 school, while in 3 schools such inspection was not desired at present.

In 10 schools an examination and report as to the sanitary condition of the premises was asked for, but in 3 schools this was not desired.

Sanitary surveys and reports were made in 9 schools, the tenth school will be examined in 1914 when the Medical Inspection comes into force there. In most of these schools the conditions found were satisfactory, but in some, defects were found and reported to the Governors.

These examinations were made by Dr. Parker and Dr. Burnell-Jones, who also carried out the Medical Inspection of pupils in 7 schools.

The pupils examined were those admitted to the Secondary Schools since the beginning of 1912, except those admitted from Elementary Schools and examined by County Medical Inspectors within the year preceding their admission. The total number examined was 163 of whom 122 were boys and 41 girls. Of these 101 boys and 22 girls were examined by the County Medical Inspectors, while 21 boys and 19 girls were examined by their own doctors.

The ages at examination ranged from under 7 to over 16, and from this fact and the small number inspected the figures obtained are of little or no statistical value, but are given as illustrating the defects found. 66 pupils were under 12 years of age, while 97 pupils were 12 years of age or older.

As might be expected, the general standard of nutrition, clothing and cleanliness was higher than in the Elementary Schools. Somewhat dirty heads (with nits) were reported in only 2 cases (1 boy and 1 girl.)

Slight defects of vision in one or both eyes were found in 22 boys and 7 girls, and severe defects in 9 boys and 1 girl. Six boys and 1 girl had glasses at the time of inspection, while 13 boys were referred to their own medical attendant for further examination and treatment for defective vision. The proportions of cases of

normal vision and the several degrees of defect are approximately similar to those found in Elementary Schools, with some variations which are probably accounted for by the small number examined.

The following defects were also found :—

Tonsils slightly enlarged	...	.	28 cases.
Tonsils considerably enlarged	..	...	2 „
Slight adenoids	...	...	17 „
Glands slightly enlarged	...	...	12 „
Glands considerably enlarged	...	...	2 „
Otorrhœa (past)	...	...	2 „
Defective hearing (slight)...	...	...	6 „
Defective hearing (marked)	..	...	1 „
Marked dental cases (referred to dentist)		...	9 „
Anæmia	...	...	4 „
Lung defects (not Tuberculosis or Bronchitis)		.	2 „
Nervous debility	...	...	1 „
Headache	...	...	2 „
Goitre	...	...	4 „
Spinal curvature	...	...	4 „
Other deformities	...	...	2 „

The average number of carious teeth recorded was 2·8 for each of the 157 pupils, among whom 33 were recorded as having no carious teeth.

Directions were given to the parents of pupils in 37 cases, to the teacher in 9 cases and to both parent and teacher in 3 other cases.

The presence or absence of parents at the time of inspection was no doubt influenced by the fact that the pupils in a Secondary School are drawn from a much larger area than those in an Elementary School, and are boarders in some instances. The presence of a parent is recorded in 11 cases, absence in 130 cases, while in 22 cases the point is not noted. Many of the latter are cases of pupils examined by their own doctor, in some of which the parent was probably present.

During the year 1913 there were 88 Pupil Teachers, Bursars, and Teacher Candidate Scholars medically examined by the County Staff, and one of these was specially examined by the County School Oculist.

### Part III.

#### MACHINERY FOR DEALING WITH DEFECTS FOUND ON INSPECTION.

This section of the work has been dealt with in detail in previous reports so that only special points and alterations in procedure require to be mentioned.

## AFTER CARE WORK.

The arrangements for following up cases have on the whole worked smoothly and well and no alterations in procedure have been required. The regulations provide that returns be sent to the Health Department within 4 months of their being issued. While there still continues to be some delay in sending in these case-sheets the returns have been very much better from this point of view. A few Health Visitors still fail to return their case-sheets regularly to the Clerk. During 1913, 2275 cases were referred to District Education Sub-Committees (see Table VI).

The constitution of the District Education Committees has during the year been amended. Each School has now a Representative upon this Committee. The District Education Committees are responsible for the oversight of the after care work and each representative should be the Care Visitor, responsible and definitely appointed to look after the after care work in connection with that school. This is an arrangement which I strongly advocated in last year's report.

If a definite Care Visitor is appointed for each separate school we could if necessary communicate as regards individual children directly with that Visitor and attention to the defects would be facilitated, all routine work, such as the passing to and fro of the case sheets, being done, as at present, through the Clerks.

This is not altogether the case at present as the representative on the District Committee does not in every instance undertake the after care work for the school. It is however much more so the case than formerly.

## DISTRICT NURSES' WORK.

This work has continued during 1913 without alteration. Arrangements have now been made with 94 Nursing Associations, an increase of 13 during the year. Nearly all of these are affiliated to the County Nursing Association. The Associations are irregularly distributed and deal with only some of the Schools, inspections in 271 Schools being attended by district nurses. During 1913, 545 inspections were attended by district nurses, and 1301 cases were referred to them for home visits. Their reports state that 2012 home visits were paid to these cases.

These figures show a steady increase in the work being done, as regards after care, by the district nurses.

## ATTENDANCE OF PARENTS.

In 41 per cent. of cases one of the parents (almost invariably the mother) attended the inspection and received direct instructions from the Medical Inspector as to existing defects. In 1912, the percentage was 41, in 1911, 44 and in 1910, 43.



The percentage attending varies greatly in different parts of the County, being naturally higher in Urban areas. While the percentage of attendances is not unsatisfactory for Rural areas, it is lower than one might have anticipated in Urban districts and much less than is desirable.

#### PROVISION OF SPECTACLES.

The general machinery for this purpose has not been altered. At the end of the year the number of eye centres in use in the County was 33, the same as last year. During 1913, as in previous years, a few refusals to obtain spectacles were met with. In all the cases with marked defects it was found possible, by direct letters to the parents and by pressure exerted in other ways, to induce the parents to obtain the glasses. Children with less serious eye defects for whom the parents fail to obtain glasses are reported to the District Education Sub-Committees, and in a good many of these cases spectacles are ultimately obtained. 86 per cent. of the children summoned to attend at the different eye centres attended. Of the remaining 14 per cent., the majority attended on being again sent a notice to attend.

The spectacles obtained under the present contract have been very satisfactory and the 3/6 has been as readily forthcoming as the previous charge of 2/6 used to be. During the year 3/6 for spectacles was received from 953 of the parents, while in 101 cases the cost, or part of the cost, was provided out of County funds. The amount paid towards the provision of spectacles by the County Education Committee during the financial year ending July 31st, 1913, was £11. 7s. 6d.

Applications for financial assistance are made on a special form by the District Education Sub-Committee, after they have investigated the suitability of the cases, and are then submitted to the Chairman of the Attendance and Health Sub-Committee for his decision.

During the year, 1032 new pairs of spectacles were supplied, while 468 pairs previously ordered were repaired.

Children provided with spectacles are re-examined by the Medical Inspectors at their next visit to see that the spectacles fit and have not been bent out of shape. If required in special cases the children are referred back to Dr. Bendle.

#### TUBERCULOSIS CASES.

During the year steps were taken to co-ordinate the School work with the Tuberculosis work undertaken by the County Council. In addition to routine cases teachers are instructed to present to the Medical Inspector for examination all children which are suspected to have lung trouble or weakness. The detection of really early

cases of tuberculosis in children is often a matter of extreme difficulty and in the short time at the disposal of Medical Inspectors and under the anything but ideal conditions for quiet examination which usually prevail it is often impossible to be satisfied as to the existence or absence of early lung tuberculosis. Even under the best conditions several detailed clinical examinations may be required before an accurate diagnosis can be made.

To allow such complete examinations to be made it is now an instruction to all Medical Inspectors to refer all the doubtful cases of tuberculosis to the Tuberculosis Dispensaries to be examined by the County Tuberculosis Officers. This is done by marking the Cards "refer to T.O." Arrangements are then made in the office for these cases to attend the Dispensaries while the Medical Inspection cards are sent to the Dispensaries so that the Tuberculosis Officer has the record of the case and the examination particulars before him at the time of examination. The results of the examination are briefly recorded on the card and so in turn are available for the Medical Inspector. If the child is found to be suffering from tuberculosis it is taken up by the Tuberculosis Sub-department and dealt with like other cases of tuberculosis. At present owing to the incomplete nature of the Tuberculosis Institutions in the County, treatment in a Sanatorium or Sanatorium School cannot be usually offered, but in several cases treatment at the dispensaries has been given.

Whether children suffering from tuberculosis should or should not attend School depends upon the seat and degree of the disease and some are excluded while others are allowed to attend.

There have been several cases in the past of teachers who have continued teaching in county schools while suffering from advanced tuberculosis of the lungs. This is extremely undesirable and dangerous. The two main sources of infection in this disease are from the sputum and from the fine spray given out in coughing, sneezing and vigorous speaking. The latter is essential for teachers and it is evident that if the disease is at all advanced teachers so suffering must be a great danger to the children in the school.

The following resolution was passed December 12th, 1913, by the County Education Committee:—

"Any Teacher who becomes affected with Tuberculosis in any form (including "Consumption) must as soon as he becomes aware of it report the facts to the "County Education Committee. Failure to observe this rule will render the teacher "liable to immediate dismissal."

This minute was adopted as applying to teachers in Council Schools and it was agreed that Managers of Voluntary Schools be asked to adopt the same regulation.



### TREATMENT OF DEFECTIVE TEETH.

Considerable attention has been paid during the year to this very important part of medical treatment. The work done has been carried out under two different schemes :—

OLD SCHEME.—This scheme was fully described in last year's Report. The essential difference from the present scheme is in the basis of selection of the schools to be visited by the dentist. The schools visited by the dentist were those in which the managers agreed to contribute £1 for each day upon which the dentist worked, this being approximately half the cost of treatment.

The old scheme was in operation from November 20th, 1912, to May 9th, 1913.

The work done is shown in the following table :—

#### OLD SCHEME.

DISTRICT.	No. of Schools.	No. of Schools visited.	No. of days worked.	Children examined.		Children treated.	
				Age 6 and 7.	Other Ages.	Age 6 and 7.	Other Ages.
Axbridge ..	41	6	3	21	14	17	11
Burnham ...	3	1	1	14	6	14	6
Bath Rural ...	19	3	3	24	9	22	9
Bridgwater ..	39	4	2	23	4	18	4
Chard Urban ...	3	3	11	66	81	63	77
Chard Rural ...	22	14	12½	104	70	76	64
Crewkerne ...	3	2	3	27	5	26	5
Ilminster ..	3	3	8½	35	88	29	85
Clutton ...	26	1	2	17	11	11	10
Dulverton ...	14	1	1	0	7	0	7
Frome Urban ...	6	3	7	43	39	40	35
Frome Rural ...	26	3	3	24	12	19	10
Keynsham ...	15	4	4	38	17	33	16
Langport ...	27	2	2	17	1	12	1
Long Ashton ...	24	4	2	28	10	24	10
Shepton Mallet Rural	23	6	4	30	9	20	9
Taunton ...	31	3	4	23	10	22	10
Wellington Rural ...	12	1	1	6	5	3	5
Wells Rural ...	22	1	1	9	1	9	1
Glastonbury ...	2	2	2	21	9	18	8
Street ...	2	1	2	45	0	44	0
Wincanton ...	31	7	13	78	107	62	101
Yeovil ...	32	5	4	47	19	39	19
	426	80	96	740	534	621	503

The scheme was modified because sufficient support was not received from the Managers, particularly in the larger Urban areas. Only 19% of the Schools joined and if the two areas in which special efforts were made are excluded only 61 schools (or 14%) joined in the scheme.

NEW SCHEME.—One dentist obviously cannot cover the whole of the County so that some basis of selection of the schools to be visited is inevitable. The basis of selection is that the dentist visits all the schools in which sufficient support from the parents is forthcoming. Some payment is exacted towards the cost of treatment. The basis fixed is that for the first year of dental treatment parents of such children are asked to contribute 6d. for each child examined. If no treatment is required the child is examined free in the next and following years so long as treatment remains unnecessary, but a further sum of 6d. is charged on each occasion after the first on which it is necessary to give any treatment. The effect of this is that, should treatment be found unnecessary on the first or subsequent occasion, the fee of 6d. is retained and credited to the parent until such time as the child requires treatment. No treatment is given unless the necessary payment has been made by the parents or, on their behalf, by persons interested in the children.

The amount of support received has varied greatly in the different districts. For 1913 it was only sufficient to occupy the one dentist rather less than all his time. In other words, the district already visited was due for a revisit in rather less than a year's time. With the increased interest being taken in the scheme it is probable that the response for 1914 will be more than sufficient for one dentist.

The School Dentist when he visits a particular school examines all the scholars aged 6 and 7 for whom contributions from the parents are forthcoming. At this or subsequent visits he examines all scholars who have been previously examined, and other children who have reached the age of 6 since his last visit, provided the necessary contribution of 6d. is paid.

Although for reasons already stated it is not practicable to treat all children under this scheme, really urgent cases of older children, such as those specially recommended by Medical Inspectors for dental treatment and any others as far as time will allow, are treated by the School Dentist. For these children their parents are asked to pay a charge of 1s. 6d. per child.

The areas are selected by the School Medical Officer and notifications to all the schools are sent out a good many weeks before the dentist is due to visit the district. When the returns as to the number of children whose parents wish to avail themselves of the dentist's services have been sent in a programme is arranged.

The dentist does not examine children on one occasion and then treat them on another—the practice which is usually adopted in most dental treatment schemes. Such a plan is desirable but it is very difficult to arrange in country districts with scattered schools, many of which are quite small. The age group children who have contributed to treatment are examined and treated as far as found to be necessary, while any spare time is used to treat older children.

The children examined under the new scheme and the distribution of the schools visited are shown in the following table:—

## NEW SCHEME.

DISTRICT.	No. of schools.	No. of schools visited.	No. of days worked.	Children examined.		Children treated.	
				Age 6 & 7.	Other ages.	Age 6 & 7.	Other ages.
Axbridge ...	41	4	1½	15	7	14	7
Burnham & Highbridge	5	5	6	50	27	46	27
Weston-super-Mare ...	6	5	10½	126	31	112	28
Bath ...	19	5	6	52	32	48	31
Bridgwater ...	39	4	5	56	20	53	20
Clevedon ...	5	5	4	31	22	26	22
Clutton ...	26	11	6½	62	42	56	41
Midsomer Norton ...	6	6	4½	48	36	44	34
Radstock ...	2	2	3½	42	6	40	6
Frome Rural ...	26	1	½	7	4	6	3
Keynsham ...	15	5	4	42	8	40	8
Langport ...	27	7	3	31	9	29	8
Long Ashton ...	5	5	6	60	31	55	28
Shepton Mallet Rural	23	7	6	58	20	54	18
Taunton Rural ...	31	5	5	33	32	32	32
Wellington Urban ...	5	5	10	78	57	71	53
„ Rural ...	12	2	2	22	9	22	9
Wells Urban ...	3	3	2	29	5	27	5
Glastonbury ...	2	2	1	6	7	6	6
Street ...	2	2	4	50	9	47	8
Williton ...	29	7	8	48	22	47	22
Minehead & Watchet..	4	4	4	62	33	62	33
Wincanton ..	31	8	8	59	42	57	42
Yeovil ...	32	11	13	117	54	115	51
	396	121	124	1184	565	1109	542

The following table summarises the work done for the whole year, including the three weeks in which the Dentist was working in 1912.

	No. of schools.	No. of schools visited.	No. of days worked.	Children examined.		Children treated.	
				Age 6 & 7.	Other ages.	Age 6 & 7.	Other ages.
Urban ...	58	57	87	809	475	747	451
Rural ...	435	144	133	1115	624	983	594
County ...	493	201	220	1924	1099	1730	1045

In this connection it must be remembered that a certain amount of time is inevitably lost in dealing with small schools; not only are they difficult of access but sometimes the number of children presented is insufficient to occupy the whole of the day. To encourage the scheme the Dentist has been sent in a number of cases to schools in which only a moderate response has been given, and certainly not a full day's work.

The character of the dental work carried out for the children aged 6 and 7 years only is summarised in the following table which deals with the whole of 1913 and the few weeks of 1912.

		Old scheme.	New scheme.	Total.
Requiring extractions only	...	335	769	1104
„ fillings only	...	114	87	201
„ extractions and fillings	...	120	253	373
„ scaling	...	50	—	50
„ other dental treatment	...	2	—	2
		<u>621</u>	<u>1109</u>	<u>1730</u>

The estimated number of children age 6 and 7 in the County Schools is 10,410; of these 1730 were treated by the dentist, equal to about 16·6 per cent. of the whole.

As far as possible the services of district nurses have been utilised to assist the dentist in his work; payment being made to them at the rate of 1/- per hour. Where they have not been available it has generally been possible to obtain the services of someone to assist, but difficulty has arisen on a few occasions in regard to assistance. 47 district nurses assisted the dentist on 105 days; 35 other persons assisted on 57 days.

The scheme has not been easy to work in a number of directions, some of which require to be discussed.

Considerable difficulty is experienced in arranging for the conveyance of the dental chair and other dental apparatus. Although reduced to as simple a form as possible this means at least two bulky packages which have to be sent from school to school by carrier or by other local means arranged on the spot. Although we have obtained a great deal of local assistance and some of the teachers have been most helpful, considerable difficulties have been experienced and on several occasions the apparatus has gone astray resulting in the dentist having to waste the following day. The dentist gets to the school by train and owing to the difficulties of the local train service he sometimes cannot get to the schools until fairly late in the morning. To enable him to arrive reasonably early he has to frequently change his place of residence.



A great deal of the inconvenience and waste of time in connection with travelling and conveyance of apparatus could be obviated if the dentist could be provided with a small motor car which would accommodate his apparatus as well as himself.

In the old scheme the dentist as a rule worked on the school premises ; in the new scheme in nearly every case we have managed to hire outside premises. This is a great advantage from the teaching point of view but it has considerably increased the cost, while the obtaining of satisfactory rooms has meant a great deal of correspondence and sometimes the rooms have not been satisfactory. Naturally with the continuance of the scheme these difficulties will diminish. The dentist worked on school premises at 11 Centres and outside school premises at 58 Centres.

Under the old scheme a number of Dental Talks were given by Health Visitors and by the school nurses in the schools. Those held at the commencement of afternoon school were fairly well attended but those given after school hours were exceedingly badly attended. As the Committee did not see their way to allowing the Dental Talks in school hours they were given up. I am of opinion that something of the sort is advantageous and if they are not given by school nurses it is very desirable that the teachers themselves should take up the work.

The cost of the dental scheme for the period under consideration (slightly over 13 months) was as follows :—

			£	s.	d.
Capital initial expenses amounted to	...		18	14	0
Current expenses—					
Salary of dentist	...	...	335	16	8
Dentist's expenses and cost of conveying apparatus			66	7	3
Postages	...	...	18	19	2
Stationery and Printing	...	...	30	7	0
Dental materials and renewals	...	...	38	4	8
Hire of rooms	...	...	14	4	0
Nursing assistance	...	...	26	12	3
Assistance other than from district nurses	...	...	8	9	5
Medical assistance	...	...	0	0	0
			<hr/> 539 0 5 <hr/>		

In addition to the current expenses mentioned the clerical work in connection with the scheme takes up about half the time of a clerk. A further £35 should be added for this item, bringing up the cost for the period to about £574. For a year's working the cost would be about £520 including clerical assistance.

The sums received in connection with the scheme during the 13 months have been as follows :—

			£	s.	d.
Managers' guarantees	..	...	94	10	0
Payments by parents	...	...	68	3	0
			<hr/> £162 13 0 <hr/>		

In addition to the work carried out by the school dentist, in several schools visits of a dentist have been arranged and paid for by philanthropic persons interested in the school. For the Shepton Mallet Urban Schools a resident dentist, Mr. J. M. Calder, has very kindly undertaken to visit the schools and treat at his Surgery without charge, children of the age periods selected who require treatment. A number of older children have also been treated. In this way 38 children aged 6 and 7 have received treatment and 21 older children. The treatment given has been both extractions and fillings.

### VERMINOUS CONDITION OF HEADS.

The scheme has been fully described in previous years and no material alterations were made during the year. The greater part of the time of the school nurses was taken up with working the scheme.

The results obtained by the nurses are set out in the following tables :—

#### PRIMARY SCHEME.

DISTRICT.	No. of children inspected.		No. of children excluded.	No. of children whose parents were prosecuted.	Percentage verminous. First inspection.		Percentage verminous. Second inspection.		Percentage excluded.	
	Boys.	Girls.			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Taunton Rural ...	97	103	32	—	28·0	79·0	23·0	52·2	6·2	25·2
Yeovil Rural ...	371	376	79	—	29·3	52·1	14·9	40·0	4·0	17·0
Wellington ..	820	689	75	28	14·7	48·9	7·7	36·0	1·1	9·2
	1288	1168	186	28	20·0	52·4	10·8	38·6	2·3	13·3

#### RE-EXAMINATION SCHEME.

DISTRICT.	No. of children inspected.		No. of children excluded.	No. of children whose parents were prosecuted.	Percentage * Verminous. First Inspection.		Percentage * Verminous. Second Inspection.		Percentage excluded.	
	Boys.	Girls.			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Wells Union ...	1920	1708	31	8	9·8	21·9	34·6	61·2	0·0	1·7
Frome Union ...	2319	2281	99	9	9·9	24·2	57·6	60·6	0·5	3·7
Shepton Mallet Union	1552	1699	61	8	4·7	15·0	36·6	49·2	0·3	3·3
Wincanton ...	1387	1341	132	8	11·4	29·8	14·5	34·5	1·0	8·8
Axbridge ...	1206	1078	107	4	12·6	30·1	15·2	32·3	0·4	9·4
Weston-super-Mare	1062	1089	107	12	6·8	23·0	14·7	30·6	1·8	8·0
Long Ashton ...	739	751	78	7	11·7	27·4	11·4	25·5	0·6	9·8
Chard ...	176	519	52	7	12·0	38·1	10·0	14·8	1·7	9·4
Taunton ...	444	499	37	8	12·1	26·2	15·5	42·9	1·8	5·8
	10,805	10,965	704	71	9·1	24·5	19·0	37·2	0·6	5·7

\* This is the percentage found verminous of the children selected for examination, not the percentage of the whole school.

In the Primary Scheme Table the results are shown when schools are visited for the first time or only after a very long interval from the first visit. All the children are then examined and all again at the second visit. This table shows, therefore the number of children normally verminous in the schools before the Cleansing Scheme has been put in action. 52·4 per cent. of the girls and 20·0 per cent. of the boys were verminous when first inspected.

The tables show that the percentage of children, especially girls, found verminous is still very high. Undoubtedly a great improvement has taken place in the County generally and in special areas in particular. Both the Medical Inspectors and the School Nurses report a great diminution in the grossly verminous children.

Although great leniency has been shown to parents, it has been found necessary to institute proceedings in a number of cases. 64 parents of 99 children have been prosecuted. In six cases convictions were not obtained. Five of these were adjourned and the children were cleansed by the parents. In the remaining cases the 64 parents were fined sums varying from 1/- to 20/- with, or without, costs.

The percentage of parents prosecuted under the ordinary scheme was 0·65 and 0·22 per cent. under the re-examination scheme.

A careful consideration of the detailed results brings out two facts of considerable importance in relation to the effective working of the scheme. One is that certain schools not only show when first inspected a very much higher percentage of verminous children than the average, but that when re-inspected they still show this unenviable feature. The other is that certain children are again and again, and in fact whenever the school is re-inspected, found to be in a highly verminous condition. They are habitually verminous children and their parents in spite of warnings and prosecutions allow them to remain so.

Undoubtedly in many schools these few habitually verminous children are the main cause of the verminous conditions found in other children and serve as centres of infection. Now that a considerable proportion of the schools have come under the working of the scheme, I propose to pay special attention to these habitually verminous children. As far as practicable they will be more closely followed up than in the past and if necessary their parents again prosecuted. In these special cases it may be possible to visit the homes and also to have the home cleansed under Section 46 of the Public Health Act, 1875. It is most unfair to cleanly children to have these habitually verminous children in the schools. Sympathy with the difficulties of parents of these verminous children on account of their possible poverty and hard struggle to bring up a family is diminished by the



knowledge that they have a simple and very efficacious remedy to hand in that they can always keep their childrens' hair cut short.

As regards schools with a maintained high percentage of verminous children this may be due to the presence of a number of such habitually verminous children, while also undoubtedly the condition of the school is markedly affected by the influence of the Head Teacher and teachers generally. Teachers can do a great deal to diminish the prevalence of verminous conditions amongst their scholars and in schools which are being visited from time to time by the School Nurses they should not find it difficult to maintain a high standard of cleanliness.

I think that considerable progress is being made in making parents realize that this condition is a disgraceful one and not an inevitable concomitant of school life, but I regret that the County Education Committee some years ago were unable to accept my suggestion that prizes should not be given to children specially reported as verminous. This would have been a powerful lever to educate the parents.

## **Part IV.**

### **THE RESULTS OBTAINED IN REGARD TO THE TREATMENT OF INDIVIDUAL CHILDREN.**

This information is derived from several sources, the most important and extensive being from the case sheets (Form M.I. 2.) sent to the District Education Sub-Committees.

Since a considerable interval must of necessity elapse between the examination of the case and information as to the results of treatment, it is not possible to give particulars of all the 1913 cases. The following table gives particulars of cases reported to District Committees during the latter half of 1912 and the first half of 1913. It therefore includes cases reported for a period of a year.

In 293 cases (13 per cent.) the returns were not obtainable, although several applications were made. They sometimes get mislaid or accidentally destroyed in the hands of the Voluntary Visitors and no definite information can be obtained.

In the remaining 87 per cent. of cases returns are available and have been analysed. Under "nothing done" is included those cases in which the parents promise to obtain treatment. Very often this is merely an excuse to evade unwelcome enquiry, but in some cases treatment will no doubt be ultimately obtained.



## DISTRICT EDUCATION SUB-COMMITTEES. AFTER-TREATMENT CASES.

CONDITION.	No. of cases referred.	No. of returns received.	Case Sheets not returned.	ANALYSIS OF RETURNS RECEIVED.				Left school or district.
				Satisfactory.	Partially satisfactory.	Nothing done.	No treatment recommended.	
Tonsils and adenoids ...	561	464	97	224	44	143	—	53
Ear discharge ...	181	166	15	101	9	32	—	24
Ringworm ...	196	192	4	191	—	—	—	1
External eye disease ...	50	41	9	32	4	2	—	3
Anæmia & heart conditions	185	168	17	101	22	22	—	23
Defective teeth ...	243	206	37	70	18	66	—	52
Lung conditions ...	88	82	6	66	8	5	—	3
Other conditions ..	728	620	108	341	83	84	54	58
<i>Totals</i> ...	2232	1939	293	1126	188	354	54	217

## DISTRICT EDUCATION SUB-COMMITTEES. AFTER-TREATMENT CASES.

CONDITION.	No. of cases referred.	PERCENTAGES.						
		No. of returns received.	Case Sheets not returned.	ANALYSIS OF RETURNS RECEIVED.				Left school or district.
				Satisfactory.	Partially satisfactory.	Nothing done.	No treatment recommended.	
Tonsils and adenoids ...	561	83	17	48	10	31	—	11
Ear discharge ..	181	92	8	61	5	20	—	14
Ringworm .	196	98	2	100	—	—	—	0
External eye disease ...	50	82	18	78	10	5	—	7
Anæmia & heart conditions	185	91	9	60	13	13	—	14
Defective teeth ...	243	89	11	34	9	32	—	25
Lung conditions ...	88	93	7	80	10	6	—	4
Other conditions ...	728	85	15	55	14	14	8	9
<i>Totals</i> ..	2232	87	13	58	10	18	3	11

The tables show that in 71 per cent. of the cases for which information is available, and which were referred to Sub-Committees, the results obtained were satisfactory or partially satisfactory, 11 per cent. had left school without treatment being obtained, while in 18 per cent. nothing had been done.

The results obtained are in general very similar to those of previous years. The percentages for some of the most prevalent conditions as regards treatment obtained during the last four years are shown in the following table:—

		PERCENTAGES.						
		Tonsils & adenoids.	Ear discharge.	External eye diseases.	Anaemia & heart conditions.	Defective teeth.	Lung conditions.	Other conditions.
1910	Satisfactory or							
	Partially satisfactory	51	75	70	75	27	79	78
	Nothing done	45	24	24	19	66	15	17
	Left school or district	4	1	6	6	7	16	5
1911	Satisfactory or							
	Partially satisfactory	51	73	85	75	44	96	75
	Nothing done	34	19	11	9	39	2	15
	Left school or district	15	8	4	16	17	2	10
1912	Satisfactory or							
	Partially satisfactory	49	73	70	81	39	87	74
	Nothing done	33	21	20	8	46	10	17
	Left school or district	18	6	10	11	15	3	9
1913	Satisfactory or							
	Partially satisfactory	58	66	88	73	43	90	75
	Nothing done	31	20	5	13	32	6	15
	Left school or district	11	14	7	14	25	4	10

The figures given only show part of the results, as regards treatment, obtained from Medical Inspection. They only show the results obtained from that part of it which is dealt with by voluntary efforts through the District Education Sub-Committees and with assistance from district nurses.

The work of the nature of treatment undertaken by the County Education Committee consists of the treatment of visional defects, cleansing of verminous children, treatment of ringworm and dental treatment. This work is described elsewhere in the report.

Considerable attention has always been paid to the presence of adenoids and during the year strong pressure was brought to bear upon a number of severe cases in which the parents had neglected for long periods, often years, to provide any treatment. Letters threatening prosecution if treatment was not obtained were sent to many of these cases after all other methods of persuasion had failed. This procedure was only adopted late in the year but was found to give a large measure of success, the parents obtaining operative treatment. If necessary, proceedings would have been taken under the Children Act, 1908, Sec 12.

This line of action received strong support from the case of *Oakley v. Jackson*. This was a case in which action was taken under this section by the Leicestershire County Council against a parent who failed to obtain appropriate treatment for his child who suffered from adenoids with the not uncommon concomitant symptoms of mental dulness, impaired breathing and deafness. The justices before whom the case was first tried ruled that there was no liability on the parents. They were asked to state a case and the Judges who heard it decided (November, 1913) that on the facts stated the justices might properly have convicted and the case must go back for re-hearing.

Attention to minor degrees of adenoids is also important. During 1913, as many as 979 such cases were reported from routine inspections. These cases are prescribed breathing exercises at the school.

All cases of marked adenoids are re-inspected by the Medical Inspectors, while many of the slight cases are also re-inspected yearly. Of 323 of the latter so inspected in 1913, 182 were reported as cured, 3 were improved, while the remaining 138 were either unaltered or worse.

The talks with parents are also very valuable, and many cases in which children are unhealthy, but only require special care or care in particular directions, are greatly benefited by medical inspection.

Information as to treatment obtained is also available from the returns of the district nurses. The cases referred to the district nurses are not in all cases identical with those referred to the District Sub-Committees, but the majority are of course the same.

The nurses attended 545 inspections. At these inspections 1301 cases were referred to them for home visits. Their reports state that in 647 cases (50 per cent.) treatment had been obtained ; in 339 cases (27 per cent.) treatment would probably be obtained ; in 115 cases (9 per cent.) no treatment was obtained or likely to be obtained ; in 35 cases (3 per cent.) no treatment was required, the cases being reported only for observation, and in the remaining 143 cases (11 per cent.) visits had yet to be made at the time the reports were received.

Of special methods of treatment the results as regards verminous heads have been dealt with in Part III., while Ringworm is discussed in Part V.

The cases of defective vision can be divided into two groups—cases of slight defects which receive no special treatment, and cases of decided impairment of vision or definite symptoms of eye-strain, which are referred to the School Oculist. During 1913 the School Oculist examined 1166 cases, and prescribed glasses in 1011 cases; particulars of these cases are given on page 13.

## Part V.

### INFECTIOUS AND CONTAGIOUS DISEASES IN SCHOOLS, SCHOOL SANITATION, etc.

During the year 158 schools or departments were closed on account of infectious disease, 97 under Article 45 (b) of the Code by the School Medical Officer, and 61 under Article 57 by the Sanitary Authority on the advice of their Medical Officer of Health.

The Schools were closed for the following diseases :—

Whooping Cough	...	...	21
Whooping Cough and Measles	..	...	1
Whooping Cough and Chicken Pox	...	...	1
Measles	...	...	107
Measles and Chicken Pox	...	...	3
Measles and Whooping Cough	...	...	1
Measles and Mumps...	...	...	1
Measles and Scarlet Fever	...	...	1
Mumps	...	...	2
Chicken Pox	...	...	1
Chicken Pox and Influenza	..	...	1
Diphtheria	...	...	2
Scarlet Fever	...	...	9
Typhoid Fever	...	...	1
Scarlet Fever and Chicken Pox	...	...	1
Influenza	...	...	1
Severe colds	...	...	1
German Measles	...	...	4
			<hr/>
			158
			<hr/>

Measles was very prevalent during the year and alone was responsible for the closure of 107 schools in addition to contributing to the closure of 7 other schools. The control of measles in schools and the reasons for the present ineffectiveness of our preventive measures was fully discussed in my report for 1911.



The Assistant School Medical Officers take no share in the Scheme for the prevention of infectious disease in the County, as their time is already fully occupied. The cases excluded by the School Medical Officer or his Assistants during the year, and apart from cases excluded under the Verminous Scheme, were 617. They were all excluded under Article 53 (*b*) of the Code. The nature of the complaints for which they were excluded were the following:—

Infectious Diseases—Chicken Pox	...	5
Diphtheria	...	1
Scarlet Fever	...	1
	—	7
Ringworm	...	273
Verminous condition of head and body	...	176
Impetigo contagiosa (28), Scabies (17) Sores, &c.		51
External eye diseases	..	8
Actual or suspected Phthisis	...	11*
Other varieties of Tuberculosis	...	4
Tonsilitis	...	3
Anæmia	...	5
Nervous and general debility	..	23
Nervous conditions (Chorea, etc.)	...	4
Ear discharge	..	5
Mental defects	...	7
Bronchitis	...	8
Heart diseases	...	5
Other conditions	...	27
		—
		617

\*In addition 17 children were excluded by the County Tuberculosis Officers.

## RINGWORM.

NUMBER OF CASES.—The number of cases known to the Health Department is shown in the following table. The number is highest in the districts in which the school nurses are, or have been, working, and there are probably still a good many unrecognised cases.

## RINGWORM CASES AT END OF 1913.

DISTRICT.			No. of Cases.	Percentage of School Population.
Axbridge	...	...	27	0·74
Bath Rural	..	...	4	0·24
Bridgwater Rural	...	...	11	0·47
Chard Rural	...	...	13	0·99
Ilminster	...	...	4	1·00
Chard Urban	...	...	1	0·11
Clevedon	...	...	7	1·08
Clutton	...	...	4	0·14
Crewkerne	...	...	2	0·32
Dulverton	...	...	2	0·33
Frome Rural	...	...	19	1·21
Frome Urban	...	...	1	0·06
Glastonbury	...	...	8	1·60
Keynsham	...	...	1	0·09
Langport	...	...	9	0·47
Long Ashton	...	...	12	0·47
Midsomer Norton	..	...	3	0·23
Radstock	...	...	0	—
Shepton Mallet Rural	...	...	7	0·50
Shepton Mallet Urban	...	...	1	0·15
Street	...	...	4	0·69
Taunton Rural	...	...	4	0·20
Wellington Rural	...	...	4	0·42
Wellington Urban	...	...	1	0·11
Wells City	...	...	12	2·09
Wells Rural	...	...	9	0·71
Weston-super-Mare	...	...	16	0·80
Williton	...	...	18	0·84
Wincanton	...	...	16	0·80
Yeovil Rural	...	...	4	0·18
<i>Totals</i> ...			224	0·53

At the end of 1912 the number was 208 while at the end of 1911 there were 323 cases. A considerable number of the cases are detected through the work of the school nurses.

Much attention is paid to following up cases, while a small number have been actively treated by two of the School Medical Inspectors.

The following figures show the number of schools with one or more cases :—

Schools at end of 1913 with	Number of schools.
0 known cases.	405
1 „ case.	49
2 „ cases.	16
3 „ „	10
4 „ „	5
5 „ „	4
6 „ „	1
7 or more known cases.	7

The 12 schools with 5 or more cases are Clevedon St. John's (5 cases), Beckington (5), North Petherton (5), Weston-super-Mare Central (5), Mark (6), Minehead Council (8), Glastonbury St. John's (8), Wells St. Thomas (8), Curry Rivel (9), Shepton Beauchamp (10), Castle Cary (11), Writhlington (12).

Under present conditions the duration of ringworm cases extends into many months and sometimes years. Very accurate figures are not obtainable, but the following table is as reliable as possible, dealing with children in the Somerset schools.

#### DURATION OF RINGWORM CASES IN MONTHS.

The duration of the cases still uncured January 1st, 1914, dating from the period when first recognised and excluded from school, is as follows :—

Months.	Cured cases.	Cases still uncured. January 1st, 1914.
Under 2 months	12	39
2 and 3 „	44	30
4 „ 5 „	47	33
6 „ 7 „	37	29
8 „ 9 „	15	15
10, 11 and 12 months	30	14
13, 14 „ 15 „	19	10
16, 17 „ 18 „	16	13
1½ to 2 years	19	12
2 to 3 „	13	25
Over 3 „	5	4
	<hr/> 257	<hr/> 224

Average duration of the cured cases = 10·07 months.

Average present duration of cases still uncured = 10·3 „

This table shows that a number of the cases remain uncured for years, and are not receiving adequate treatment. In several directions improvements have been effected in obtaining treatment for cases of Ringworm.

The services of district nurses are being utilised in an increasing number of cases. In 1912 they only assisted in 19 cases while during 1913 district nurses have been assisting in 92 cases in the treatment of ringworm, working under the directions of the medical practitioner in charge of the case but paid by the County Education Committee.

The arrangements made with Dr. Iles, of Taunton, to treat cases of ringworm by X-Rays have been continued. Considerable difficulties have been met with in regard to arranging the treatment. During 1912, twelve children were treated and during 1913, 10 cases. Of the whole 22 cases, 16 were cured while 6 were not completely cured. Nearly all the 16 cured were freed from ringworm by a single application of the X-Rays and were mostly back at school in periods varying from 5 to 12 weeks.

In a good many instances parents were unwilling to have their children treated and could not be induced to send them for treatment.

The amount spent on the travelling expenses of the nurse, children and parents to the X-Ray centre for these cases amounted to £5 3s. 5d., while the fee paid to Dr. Iles was 25/- for each case cured. The majority of the cases selected for treatment have been from the Chard Union.

In addition a number of cases have been treated by the whole time Medical Inspectors by ointments and other applications. This has enabled a number of children to be cured and sent back to school.

The procedure for ringworm cases is fully set out in my Annual Report for 1911 and has not been materially altered. It is not infrequently made a cause of complaint by District Education Committees that cases of Ringworm are excluded and not then re-inspected for very long periods. It is not practicable unless the County Staff is increased to pay frequent visits but the procedure in force provides for the Health Department being kept in touch with these cases. Parents are instructed to inform Head Teachers when they think their children are cured and special forms are provided for Head Teachers to transmit this information to the Health Department. In addition the School Attendance Officers should periodically visit these cases and report. The following is the text of the letter of the County Education Secretary dated April 11th, 1911, to the Clerks of the District Education Sub-Committees.

#### RINGWORM CASES.

E 32.

I am instructed by the County Education Committee to request that you will instruct the School Attendance Officers working under the..... District Education Sub-Committee to periodically visit the homes of children who are excluded from school on account of ringworm, and to report to the District Education Sub-Committee whether the children are receiving proper medical treatment, and especially whether any such children are being employed for wages during their exclusion from school.

The notice of exclusion in respect of ringworm will be sent to you in duplicate by the County School Medical Officer so that one copy of the notice can be given to the particular School Attendance Officer concerned. The results of the visits of the School Attendance Officers should be reported by you to the County School Medical Officer.



I do not know to what extent these cases are followed up by the School Attendance Officers but very few reports of results of visits are forwarded to me.

If necessary special visits are paid in consequence of such reports.

#### ATTENDANCE OF CASES AT SCHOOL UNDER SPECIAL CONDITIONS.

The question whether cases of ringworm might attend school under special conditions was considered by the Committee on several occasions. At the meeting of the Attendance and Health Committee on Jan. 18th, 1913, the following resolution was passed :—

“That as an experiment children with ringworm be admitted to schools in the Axbridge Union on condition that they wear caps, and carry out the other conditions set out in Dr. Savage’s report of January 7th, 1913; and that subject to the approval of the Board of Education, washable linen caps be provided in the first instance for each child by the County Education Committee and that in deserving cases ointment for treating ringworm be provided out of County funds.”

The consent of the Board of Education had first to be obtained and a long delay resulted before this was received. The experiment was started in the summer of last year but not in all the schools at once as it was desirable to explain personally to teachers as far as possible the conditions of re-admission and to make careful examination as to the existence of unrecognised cases in the schools.

The conditions under which children were allowed to attend were as follows :—

1. That each child wears a suitable linen cap, renewed twice a week.
2. That the hair round all affected patches is cut and *kept* quite short. It is strongly advised that all the hair be kept cut short.
3. That each child is receiving daily application of a suitable ointment under medical supervision.

The caps were provided by the County Education Committee through the Head Teachers. The letter to Head Teachers set out that :—

“Head Teachers in schools in this Union are authorised to re-admit cases of ringworm to school provided all three of these conditions are being fulfilled. The caps and hats of affected children must be kept separate from those of other children. Separate combs, brushes and towels must also be used.

A brief daily inspection of these children will be necessary. As regards condition 3 the fact as to ointment application can be easily verified, but it may be only possible to generally ascertain that this is applied under medical supervision. If any one of these three conditions is not being complied with the child concerned must be *at once* excluded and not re-admitted until all are complied with. In such cases, if the conditions are not complied with within 7 days, the facts of the case should be reported to me.”

The number of children known to be affected with ringworm in the Axbridge Union during the period the scheme was in operation was 60. The condition of these children February 1st, 1914, was as follows :—

Attending under the Scheme	...	...	...	26
Excluded : refused Scheme	..	...	...	2
Kept away under treatment, but scheme not definitely refused				2
Away ill from other causes	...	...	...	3
Under 5 years and excluded	...	..	..	5
Cured and re-admitted	...	...	...	18
Left school	...	...	...	4
				<hr/>
				60
				<hr/>

One parent with three children refused to follow the Scheme, but after a personal visit from Dr. Parker accepted it and the children subsequently attended wearing caps. The above table shows that two others only refused to follow it.

A good deal of difficulty has been experienced in making teachers understand that they must only admit children if *all* the three conditions are fulfilled. In particular they have been allowing children to attend school with the hair not cut short. The conditions are still far from being thoroughly followed out.

There has been no evidence of the extension of ringworm in the schools due to the attendance of these children apart from the 4 cases mentioned below when some connection may be possible. Eight new cases occurred in the Axbridge Rural District since the inception of the Scheme. Of these four occurred in a school where there were no children attending under the Scheme, two occurred at Burnham R.C. where two children were attending under the Cap Scheme imperfectly carried out, and two at East Mark where the conditions were similar. One of the latter was a brother of an earlier case. Three new cases are reported from Weston-super-Mare; of these one is a sister of two other cases now cured, one occurred at a school where there were no cases attending under the Scheme, while the third case occurred in the Babies class at Locking Road School in which the only cases attending were in much higher classes.

The cost of the Scheme up to February 1st, 1914, has been :—

		£	s.	d.
Caps supplied	...	2	13	7
Ointment supplied	...	0	14	0

On the whole the Scheme may be said to be successful and has been the means of allowing a number of children to attend school with ringworm which otherwise would have had to have been excluded. It requires a good deal of supervision and I do not think the Scheme can be extended without selection to all the schools in the County. It may, I think, be continued with advantage in the

Axbridge Union and extended to districts in which sufficient supervision can be exercised, while, apart from definite Unions, it may be possible to extend it to special schools in which the Head Teachers are willing to carry out the necessary conditions.

### LABORATORY.

During the year 3142 samples and specimens were examined in the County Laboratory. The greater number were in connection with Public Health Work.

995 suspected Diphtheria swabs were examined, many of which were from school children.

915 specimens of hairs and stumps from suspected ringworm cases were examined, of which 597 showed the ringworm fungus and 318 were negative.

All the ringworm hairs examined were in connection with School work, nearly all being sent in by the School Medical Inspectors and the School Nurses.

### SANITARY CONDITIONS OF THE SCHOOLS.

Number of new schools opened during the year	..	3
„ schools discontinued „ „	..	3

Twenty-one reports have been sent on to the Education Secretary during the year, dealing with more or less serious sanitary defects in schools. The essential defects found are shown in the following table:—

Nature of defects found.	Number of schools reported for this defect.	
Offices—inadequate or insanitary	...	5
Offices kept in an insanitary condition	...	4
Defective lighting	...	3
Unsatisfactory desks	...	1
Defective ventilation	...	6
Defective heating	...	1
Playgrounds unsatisfactory	..	4
Schools very dirty	...	2

In some of the schools one fault such as defective lighting was the only defect noted, but most of the schools showed more than one defect.

By the middle of February, 1914, I found that in 8 cases the defects complained of have been remedied, in 2 partially remedied, in 5 under consideration and in 6 nothing has been done.

In my report for last year I commented upon the need for improvement in the ventilation of many schools and upon the insufficient and faulty use of ventilation arrangements. A section has been added to the "Handbook" emphasizing the importance of proper ventilation and warming and giving directions for the proper employment of means of ventilation. Such a section should prove of considerable practical utility.



## APPENDIX.

CIRCULAR H. 84. (1912).

### MEDICAL INSPECTION OF PUPILS IN SECONDARY SCHOOLS.

1. The systematic Medical Inspection of Pupils in Elementary Schools has now proved to be beneficial to the children and of great service to their teachers and parents, and it seems very desirable that these benefits should be extended to Secondary Schools. It is well known that some of the larger Public Secondary Schools in the Country have for some time carried out the Medical Inspection of their pupils with very satisfactory results.

2. Where the Governors desire it, the County Committee is prepared to arrange for the Medical Inspection of pupils in Secondary Schools as soon as practicable after their entry into the school. The inspection would be carried out by a member of the County Committee's Medical Inspection Staff.

A fee of 2/6, per pupil inspected, will be charged to the Governors, who may if they think fit recover it from the parents of the pupils in the form of an entrance fee or otherwise. This fee will not cover the cost of the Inspection but the remainder of the expense will be borne out of the County Education Fund.

The detailed arrangements for the inspection will be in the hands of Dr. W. G. Savage, the County School Medical Officer, by whom the whole of the work will be supervised.

3. Nothing in the nature of treatment will be undertaken. The parents of children found to have any defects, or to be suffering from any ailment, will be referred to their own Medical man.

4. Medical Inspection of the kind proposed, in order to be satisfactory, must be carried out systematically, and must apply to all the pupils in the school. The County Committee's offer is therefore made on condition that Medical Inspection is made the rule for all new pupils entering the school. This rule will, however, be subject to the following exceptions:—

- (a) Where the parents desire it, the inspection may be carried out by the ordinary Medical Attendant of the family, provided that a report is made on the form, and in the manner adopted by the County Medical Inspectors.
- (b) Where the pupil enters from an Elementary School and has been medically inspected by a County Inspector within twelve months, further inspection need not be insisted on, at least for a time.



## SANITARY INSPECTION OF SCHOOL BUILDINGS.

The County Committee desires to arrange, free of cost to the Governors for the Sanitary Inspection of the Buildings of Public Secondary Schools in receipt of aid from the Committee. The inspection will be carried out by members of the Committee's Medical Staff, and will be made once every three years. Such periodical inspections will, in general, obviate the necessity for any inspections by Local Sanitary Officers.

Special Inspections within a shorter period would be arranged, if unusual circumstances seemed to make it desirable.

C. H. BOTHAMLEY,

*County Education Office,*

*Weston-super-Mare,*

*July, 1912.*

*County Education Secretary.*



# TABLE I.

NUMBER OF CHILDREN INSPECTED DURING 1913.  
CLASSIFIED FOR AGE AND SEX.

<i>Age</i>	...	<i>3—7</i>	<i>7—8</i>	<i>8—12</i>	<i>12 and over.</i>	<i>All Ages.</i>
Boys	...	2585	2204	966	2531	8286
Girls	...	2475	2139	997	2410	8021
<i>Total</i>		5060	4343	1963	4941	16307

## TABLE II.

TOTAL 1913 INSPECTIONS.

SEPARATE DISTRICTS.

	Elder Children. (12 & over.)		7-8.		Infants. (under 7.)		Children specially presented. (8-11 $\frac{1}{2}$ ).				Total.	Approximate Number Children in Average Attendance.	Percentage of Average Attendance Inspected.	Per cent. Routine Inspected 1913.	Medical Inspector.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Re-inspections.		Boys.	Girls.					
							Boys.	Girls.							
Axbridge	426	314	351	335	351	315	110	127	548	625	3502	5625	62	37	Dr. Parker.
Bath	95	105	71	54	155	150	62	16	55	42	805	1634	48	38	Dr. Bendle.
Bridgwater	141	165	153	132	181	160	76	77	175	157	1417	2311	65	40	Dr. Burnell Jones, Dr. Stansfield and Dr. Parker.
Chard	211	200	163	174	159	170	121	175	124	87	1584	3238	48	33	Dr. Burnell Jones and Dr. Stansfield.
Clutton	253	283	218	245	268	262	97	66	217	250	2159	4751	45	32	Dr. Pollard.
Dulverton	56	31	31	39	31	40	21	14	12	12	287	598	48	38	Dr. Burnell Jones.
Frome	177	141	151	135	207	210	87	79	143	162	1492	3048	49	33	Dr. Howard.
Keynsham	64	59	53	58	83	96	21	44	25	25	528	1070	49	38	Dr. Heaven.
Langport	115	105	79	100	98	103	23	16	42	51	732	1872	39	32	Dr. Lodwidge.
Long Ashton	164	184	165	144	164	171	60	67	173	205	1497	3153	47	31	Dr. Parker and Dr. Bendle.
Shepton Mallet	135	110	107	103	138	96	38	34	37	59	857	2058	41	33	Dr. Annie Hyatt.
Taunton	143	124	122	101	120	112	54	55	53	57	941	1969	47	36	Dr. Burnell Jones and Dr. Stansfield.
Wellington	105	112	109	103	135	121	50	68	54	69	926	1813	51	36	Dr. Burnell Jones and Dr. Stansfield.
Wells	103	103	133	111	124	100	25	30	211	223	1163	2909	40	23	Dr. Parker.
Williton	130	129	109	103	101	109	82	68	69	72	972	2127	45	32	Dr. Burnell Jones and Dr. Stansfield.
Wincanton	94	106	92	115	141	132	31	20	60	58	849	1987	42	34	Dr. MacLaren.
Yeovil	119	139	97	87	129	128	8	41	32	44	824	2179	38	32	Dr. Walter.
<i>Totals</i>	2531	2410	2204	2139	2585	2475	966	997	2030	2198	20535	42344	48.5	33.9	



TABLE III.	
SUMMARY OF FINDINGS.	ROUTINE INSPECTIONS.

[illegible]



# TABLE IV.

SUMMARY OF FINDINGS.

ROUTINE INSPECTIONS.

CONDITIONS NOT RECORDED IN TABLE III.

DISEASE OR DEFECT.				Primary Conditions.		Secondary Conditions.	
				Boys.	Girls.	Boys.	Girls.
SKIN.	Impetigo	...	...	20	17	3	5
	Scabies	...	...	3	2	—	—
	Ringworm (head)	...	...	27	24	1	3
	„ (body)	...	...	7	6	2	—
	Other skin diseases	...	...	51	49	4	5
EARS.	Defective hearing (slight)	...	...	100	85	13	11
	„ „ (marked)	...	...	19	24	—	5
	Marked caries (referred to Dentist)	...	...	119	143	16	22
TEETH.	Organic disease	...	...	8	8	—	—
	Suspected Heart disease	...	...	12	14	—	—
HEART.	Anæmia	...	...	82	129	14	16
	Irregularity	...	...	36	29	—	—
LUNGS.	Tuberculosis	...	...	4	7	—	—
	Possible Tuberculosis	...	...	28	12	—	—
	Bronchitis	...	...	36	33	11	4
	Other defects	...	...	40	37	15	6
	Tubercular	...	...	4	1	2	—
GLANDS.	Other Tubercular diseases	...	...	3	2	—	—
	NERVOUS DISEASES.	Paralysis	...	8	4	—	—
		Epilepsy	...	5	3	—	—
		Chorea	...	—	7	1	1
		Over Excitability	...	2	2	3	4
		Nervous Debility	...	12	12	8	8
		Headaches	...	36	61	10	25
		Other conditions	...	8	14	4	2
	Rickets	...	...	52	26	16	9
	Rupture	...	...	27	5	1	1
	Deformities	...	...	67	41	24	17
	Defective speech	...	...	56	23	11	5
	Mentally defective	...	...	14	11	1	—
	Insufficient food	...	...	11	8	2	3
	„ clothing	...	...	2	3	—	2
	Very dirty or neglected	...	...	12	19	7	6
	Delicate	...	...	14	17	2	7
	Goitre	...	...	14	65	1	8
	Lateral Curvature	...	...	5	12	2	1
	Spinal Curvature	...	...	11	26	8	5
	Other conditions	...	...	121	104	35	40
Totals				1076	1085	217	221

# TABLE V.

SUMMARY OF FINDINGS.

SPECIAL INSPECTIONS.

DISEASE OR DEFECT.				Primary conditions.		Secondary conditions.	
				Boys.	Girls.	Boys.	Girls.
SKIN.	Impetigo	...	...	10	23	—	—
	Scabies	...	...	2	7	—	—
	Ringworm (head)	...	...	29	27	3	—
	„ (body)	...	...	5	4	—	—
	Other skin diseases	...	...	19	7	6	3
EYE.	External eye disease—						
	Referred to Oculist	...	...	18	15	7	5
	Not referred to Oculist	...	...	21	25	8	17
	Vision Defects—						
EARS.	Referred to Oculist	...	...	155	159	4	4
	Not referred to Oculist	...	...	106	131	27	40
	Defective hearing (slight)	...	...	26	28	5	12
	„ „ (marked)	...	...	16	11	4	—
TEETH.	Marked caries (referred to dentist)	...	...	42	48	5	6
HEART.	Organic disease	...	...	2	7	—	—
	Suspected heart disease	...	...	8	6	2	1
	Anæmia	...	...	38	46	8	12
	Irregularity	...	...	12	22	1	—
LUNGS.	Tuberculosis	...	...	12	8	—	1
	Possible tuberculosis	...	...	16	19	—	—
	Bronchitis	...	...	10	5	—	2
	Other defects	...	...	23	12	4	2
GLANDS.	Tubercular	...	...	1	—	—	—
	Other tubercular diseases	...	...	2	1	—	—
NERVOUS DISEASES.	Paralysis	...	...	6	2	—	—
	Epilepsy	...	...	6	2	—	—
	Chorea	...	...	3	4	1	—
	Over excitability	...	...	1	1	—	3
	Nervous debility	...	...	2	9	2	2
	Headaches	...	...	7	12	21	39
	Other conditions	...	...	7	6	3	5
	Rickets	...	...	6	—	2	3
	Rupture	...	...	3	3	1	—
	Deformities	...	...	19	15	3	5
	Defective speech	...	...	17	8	5	2
	Mentally defective	...	...	18	11	—	1
	Insufficient food	...	...	5	4	4	1
	„ clothing	...	...	1	2	1	1
	Very dirty or neglected	...	...	17	29	3	4
	Delicate	...	...	7	8	3	2
	Goitre	...	...	4	11	—	—
	Lateral curvature	...	...	1	2	2	—
	Spinal curvature	...	...	9	13	1	9
	Adenoids	...	...	62	40	29	23
	Tonsils	...	...	65	59	38	49
	Glands	...	...	47	35	81	56
	Ear discharge	...	...	24	24	24	12
	Other conditions	..	...	38	61	25	29
	Nothing found	...	...	217	200	—	—
Totals				1165	1172	333	351



# TABLE VI.

CASES REPORTED TO DISTRICT EDUCATION SUB-COMMITTEES  
AS IN NEED OF TREATMENT.

DISEASE OR DEFECT.				Primary conditions.		Secondary conditions	
				Boys.	Girls.	Boys.	Girls.
SKIN.	Impetigo	...	...	11	11	2	—
	Scabies	...	...	1	1	1	—
	Ringworm (head)	...	...	76	62	4	1
	"    (body)	...	...	19	11	1	1
	Other skin diseases	...	...	19	11	7	9
EYE.	External eye diseases	...	...	21	20	8	7
EYES.	Defective vision (spectacles not obtained)	...	...	38	58	—	—
EARS.	Present ear discharge	...	...	16	21	12	10
	Recent " "	...	...	12	11	12	16
	Hearing	...	...	33	39	38	42
THROAT.	Slight adenoids	...	...	44	32	52	61
	Severe adenoids	...	...	62	60	6	5
	Enlarged tonsils	...	...	181	199	52	47
TEETH.	Marked caries (referred to dentist)	...	...	130	160	23	34
HEART.	Organic disease	...	...	9	13	2	—
	Anæmia	...	...	30	51	15	18
	Irregularity	...	...	21	19	2	4
LUNGS.	Tuberculosis	...	...	6	8	7	3
	Possible tuberculosis	...	...	17	14	7	3
	Bronchitis	...	...	3	5	6	2
	Other defects	...	...	—	1	1	1
GLANDS.	Enlarged	...	...	19	13	17	25
	Tubercular	...	...	2	1	3	—
NERVOUS DISEASES.	Paralysis	...	...	5	3	—	1
	Epilepsy	...	...	8	5	—	—
	Chorea	...	...	—	1	3	—
	Over excitability	...	...	1	—	—	—
	Nervous debility	...	...	4	1	1	—
	Headaches	...	...	10	5	1	5
	Other conditions	...	...	5	4	6	6
	Rickets	...	...	2	—	—	—
	Rupture	...	...	19	8	3	—
	Deformities	...	...	18	9	3	3
	Mentally defective	...	...	15	9	7	4
	Insufficient food	...	...	11	13	9	12
	"    clothing	...	...	3	1	—	—
	Very dirty or neglected	...	...	4	6	10	7
	Delicate	...	...	16	15	1	5
	Goitre	...	...	6	20	1	6
	Lateral curvature of spine	...	...	4	12	2	—
	Spinal curvature	...	...	4	18	1	9
	Other conditions	...	...	110	88	68	70
<i>Totals</i>				1015	1039	391	417











